School-based intervention programs for PTSD symptoms: A review and meta-analysis
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CRD summary
This review found that school-based interventions may be effective in decreasing the symptoms of post-traumatic stress disorder in children and adolescents. Methodological flaws and potential inappropriate combination of results means that the authors' conclusions should be interpreted with caution and may not be reliable.

Authors' objectives
To evaluate the effectiveness of school-based intervention programmes in reducing symptoms of post-traumatic stress disorder (PTSD) in students.

Searching
Cochrane Central Register of Controlled Trials (CENTRAL), ERIC, PsycINFO and MEDLINE were searched to May 2010 for relevant studies; search terms were reported. The NREPP (the United States Department of Health and Human Services Substance Abuse and Mental Health Services Administration (SAMHSA) National Registry of Evidence-based Programs and Practices) online database was used to find specific intervention programmes. The reference lists from relevant books and articles, academic databases and websites were checked to identify additional references.

Study selection
Randomised or quasi-experimental studies of interventions to reduce symptoms of PTSD that resulted from either a single event (Type I) or from multiple exposure (Type II) in a school setting with at least one "no-intervention" or alternative intervention control group were eligible for inclusion. Studies were also included if standardised instruments were used to evaluate PTSD symptoms. Studies were excluded if treatment was for complex Type II trauma reactions from sexual or physical abuse or ongoing maltreatment, or if sufficient data to make calculations were not provided.

The studies were conducted in the United States, Armenia, Indonesia, Israel, Sri Lanka, Israel, United Kingdom, Bosnia, Lebanon and Kosovo and the trauma types students were exposed to were war or political conflict, exposures to natural disasters including earthquakes, hurricanes and tsunami, community violence and terrorism. Student age ranged from seven years to 19 years. The main treatment approaches used in the interventions were cognitive behavioural therapy, Play/Art, Eye Movement Desensitization and Reprocessing and Mind-Body Skills, although multiple forms of treatment were utilised in several studies. The interventions were delivered by therapists, social workers, teachers, school counsellors, clinical psychology trainees and mental health professionals. The control treatments included wait-list controls, clinic-based intervention, no intervention, individual intervention and partial interventions.

The authors did not state how many reviewers performed the study selection.

Assessment of study quality
The authors did not state that they formally assessed methodological quality, but in the discussion, methodological limitations of the included studies pertaining to lack of randomisation, small sample sizes, lack of independent assessors and blinding, and lack of follow-up assessment were noted.

Data extraction
Data were extracted to calculate effect sizes in the form of Cohen's d statistic for the outcomes. The effect sizes were rated small, medium or large according to Cohen's criteria.

The authors did not state how many reviewers performed the data extraction.

Methods of synthesis
The pooled mean weighted Cohen's d statistics and standard deviations (SD) were calculated using a random-effect model using the Hunter and Schmidt method.
Results of the review
Nineteen studies (4,655 participants) were included in the review; eight randomised controlled trials (RCTs), 10 quasi-experimental studies and one cluster randomised study. Sample sizes ranged from 26 to 2,500 students. Sixteen studies used cognitive-behavioural therapy methods as the main treatment approach, and the remaining three studies each used Play/Art, Eye Movement Desensitisation and Reprocessing and Mind-Body Skills.

There was a medium to large effect of school-based intervention programmes on reducing symptoms of PTSD in students with a mean weighted effect size of \( d=0.68 \) (SD=0.41).

Authors’ conclusions
The findings suggested that interventions delivered in school settings could be effective in helping children and adolescents who had experienced various traumatic events.

CRD commentary
The review addressed a clear question and criteria for the inclusion of studies were stipulated. Appropriate data bases were searched for relevant studies, but it was unclear if there were any language restrictions. Attempts were made to identify unpublished literature. There were no steps taken to minimise errors or biases at any stage in the review process. In addition, there was no formal assessment of methodological quality.

There was substantial heterogeneity in the study designs, interventions and the populations across the included studies, so pooling the results in a meta-analysis may not have been appropriate. Pooling of the extremely diverse studies included in this review only shows in a broad sense that this type of intervention may work, but only if the results of the studies were reliable, which was unclear in this review. There were no evaluations of heterogeneity across the studies.

Methodological flaws and potential inappropriate combination of results means that the authors’ conclusions should be interpreted with caution and may not be reliable.

Implications of the review for practice and research
Practice: The authors stated that the school setting could be effective in helping children following traumatic events and that school professionals could be successfully utilised in providing school-based interventions.

Research: The authors stated that there was a need for further research within school settings for children and adolescents who have experienced traumatic events.

Funding
None stated.

Bibliographic details

PubMedID
21425191

DOI
10.1002/jts.20622

Original Paper URL

Indexing Status
Subject indexing assigned by NLM

MeSH
Adolescent; Child; Female; Humans; Male; School Health Services; Stress Disorders, Post-Traumatic /physiopathology
Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.